

# Alternatives

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## 9.1 Introduction

The California Environmental Quality Act (CEQA) requires consideration of “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives” [14 CCR. 15126.6(a)]. Thus, the focus of an alternatives analysis should be on alternatives that “could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects” [14 CCR 15126.6(c)]. The CEQA Guidelines further provide that “[a]mong the factors that may be used to eliminate alternatives from detailed consideration in an Environmental Impact Report (EIR) are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts”.

A range of reasonable alternatives that could feasibly attain most of the basic objectives of the proposed Vernon Power Plant (VPP) are identified and evaluated in this section including the “No Project” alternative (that is, not developing a new power generation facility), alternative site locations for constructing and operating VPP, alternatives to the linear facilities (electric, natural gas, and water and wastewater), alternative combined-cycle configurations to the combustion turbine and steam turbine arrangement currently proposed for VPP, and alternative power generation technologies.

## 9.2 No Project Alternative

### 9.2.1 Description

If the No Project alternative is selected, the City of Vernon would not receive authorization to construct and operate a new power generation facility. As a result, the proposed facility site would not be developed and would potentially be used for some other development, consistent with the zoning. Energy that would have been produced by the proposed facility would need to be generated by another source and imported to southern California. Common available sources include older power generation facilities that operate less efficiently and release larger quantities of air pollutants than the proposed facility.

The purpose of a power plant, such as VPP, is to generate and provide electric power to the City’s customers. To generate and sell power in today’s market, generating facilities need to be operated cost-effectively and produce power at a cost acceptable to end users. With VPP, the City will incur financial risks of project success or failure.

The No Project alternative is not considered feasible because it does not meet the City’s plans for the development of new power generation facilities to boost local production and reliability and to reduce dependence on imported power, or the general objective of replacing old, less-efficient generation facilities.

## 9.2.2 Potential Environmental Impacts

VPP will produce electricity for the City's service area while consuming less fuel and discharging fewer air emissions for each energy unit generated when compared to other existing, older fossil fuel generation facilities. This is a beneficial environmental impact.

Potential environmental impacts from the No Project alternative would result in greater fuel consumption and air pollution because new power plants, including VPP, would not be brought into operation to displace production from older, less-efficient plants that have higher air emissions. An analysis of the environmental impacts from the No Project alternative is provided in Subsection 9.3.2.3.

## 9.3 Proposed and Alternative Sites

### 9.3.1 Proposed Site

The VPP will be located on a 5.8-acre parcel at 5001 Soto Street, in the City of Vernon, Los Angeles County, on land between Seville Avenue and Soto Street and south of East 50th Street. The site is immediately south of the City's existing power plant (Light and Power, Station A) at 2715 East 50th Street, in Vernon. The City's existing power plant includes the Johnson & Heinze Diesel Plant, the H. Gonzales Generating Station, and the recently commissioned Malburg Generating Station (MGS). The proposed site is in an industrial area with industrial uses surrounding the site. A power plant will be consistent with the zoning.

Use of this site will require construction of a new switchyard and transmission lines. The electrical transmission interconnection will be about 4,500 feet long and will link VPP to the Los Angeles Department of Water and Power (LADWP) power grid. Natural gas will be supplied to the power plant via a new 1-mile-long, 20-inch pipeline. This pipeline will extend from where it connects to Line 765 at Downey Road, then head west along 50th Street to Soto Street where it will turn south to the plant site.

Recycled water for the cooling tower is about 2,000 feet east in Boyle Avenue and will be delivered to VPP through a pipeline along 50th Street. Potable water will be provided to the plant from existing water mains in both Seville and Soto Streets. Potable water will be used for drinking, safety showers, fire protection, service water, and sanitary uses. Sanitary wastewater disposal will be to the City's sanitary sewer system via an 18-inch line approximately 1 mile long (two alternatives are being considered) that will connect to a sewer main owned by the Sanitation Districts of Los Angeles County (LACSD).

The facility will be in an area that has several tall industrial structures within the context of industrial uses and a neighboring power plant. The nearest residential use to the project (a rental unit), which is a potentially sensitive noise receptor, is about 750 feet from the site. There is also a subdivision about 1,500 feet southwest of the project in the City of Huntington Park.

The site has been acquired by the City and was selected to meet the basic objectives of the project, including the following:

- To safely construct and operate a nominal 610-megawatt (MW), natural-gas-fired, combined-cycle generating facility within the City of Vernon.

- To provide additional generation to meet Vernon’s growing load and meet the demands of nearby customers.
- To assist the City in repositioning its generation asset portfolio to 100 percent local generation.
- To assist the State of California in developing increased local generation projects, thus reducing dependence on imported power by providing power to the California Independent System Operator (CAISO) grid.
- To contribute to the diversification of the County’s economic base by providing increased employment opportunities and a reliable power supply.

### 9.3.2 Alternative Sites

The City also identified and assessed the suitability of several other properties for VPP.

Four potential sites that have available land were identified. Figure 9.3-1 shows the location of the alternative sites considered for construction of VPP.

#### 9.3.2.1 Alternative Site Selection Criteria

The criteria developed to evaluate the alternative sites’ suitability for VPP correspond with the reasons the proposed site was selected. These criteria include the following:

- **Proximity to infrastructure** – The site should be close to high-voltage transmission lines, a high-pressure major gas transmission system, and potential water source(s).
- **Environmental viability** – The site should have few or no environmentally sensitive areas and should allow development with minimal environmental impacts.
- **Minimal impact on surrounding community** – The site should enable the development of a power plant with minimal negative impact on the surrounding community.
- **Economically feasible** – The site should be on property owned by the City with sufficient rights-of-way in case offsite construction is needed.
- **Compliance with LORS** – The site should provide opportunity for compliance with applicable laws, ordinances, regulations and standards (LORS).
- **Size** – The site should be of sufficient land area (minimum 5.5 acres).

The alternative site locations were evaluated using the above criteria. The site characteristics are summarized in Table 9.3-1 and described in the following subsections.

TABLE 9.3-1  
Comparison Using Site Selection Criteria

Alternative Site	Parcel Size (acres)	Land Use Compatibility	Available Linear Facilities	Environmental Sensitivity	Distance to Residential
Vernon Power Plant (proposed site)	5.8	Zoned: General Industrial	PW: tap into existing line G: 1 mile T: 4,500 feet to LADWP RW: 2,000 feet S: 1 mile (Alt. A & B)	Low	1 apartment unit, 750 feet; Subdivision at, 1,500 feet
Aluminum Plant Site	27	Zoned: General Industrial	PW: tap into existing line G: 2,200 feet T: 1,500 feet to LADWP RW: tap into existing line S: 1,800 feet	Low	6 homes, 1,200 feet; Subdivision 2,500 feet
Recycling Yard	< 5 acres	Zoned: General Industrial	PW: tap into existing line G: 2,000 feet T: 1.75 miles RW: 1.2 miles S: tap into existing line, upgrade required	Low	Subdivision at 1,540 feet
City of Vernon Storage Yard	< 5 acres	Zoned: Heavy Industrial	PW: tap into existing line G: 1,000 feet T: 400 feet to LADWP RW: 1.0 mile S: tap into existing line, upgrade required	Low	Subdivision at 3,480 feet
Watkins Property	17.5	Zoned: Heavy Industrial	PW: Tap into existing line G: 1.5 miles T: 100 feet to LADWP RW: 3 miles S: tap into existing line, upgrade may be required	Low	Subdivision at 1,000 feet

PW = potable water  
G = natural gas  
T = transmission  
RW = recycled water  
S = sewer line

### 9.3.2.2 Alternative Site Description

In this section, each of the alternative sites is described and analyzed based on its feasibility for use. Environmental considerations are presented in Subsection 9.3.2.3.

#### 9.3.2.2.1 Aluminum Plant Site

The former Aluminum Plant site is a 27-acre parcel of land at the southeast corner of Fruitland and Boyle Avenues (3200 Fruitland Avenue). The site is in an industrial area, and industrial uses surround the site. A power plant would be consistent with the zoning.

Use of this site would require construction of a new switchyard and transmission lines. The electrical transmission interconnection would be about 1,000 to 1,500 feet long to the LADWP power grid. Natural gas would be supplied via a 2,200-foot-long pipeline. Recycled water would be available through an existing recycle water pipeline in Boyle Avenue,

adjacent to the site. Potable water would be provided to the site from an existing water main in Boyle Avenue. Sanitary wastewater disposal would be to the City's sanitary sewer system via an 1,800-foot-long pipeline.

The nearest residential uses to the project are about 1,200 feet east of the site. There is also a subdivision 2,500 feet east of the project in the City of Maywood.

#### **9.3.2.2.2 Recycling Yard**

The Recycling Yard is at 2221 East 55th Street, southwest of the proposed site. The site is surrounded by industrial uses and is zoned Industrial. A power plant would be consistent with the zoning.

Use of the Recycling Yard would require construction of a new switchyard and transmission lines approximately 1.75 miles long, a natural gas pipeline approximately 2,000 feet long, and a recycled water pipeline approximately 1.2 miles long. Additionally, from this site it would be necessary to tap into an existing water and sewer lines, which would have to be brought to the site.

The facility would be within an industrial area that has several nearby tall industrial structures. The nearest residential uses to the project, which are potentially sensitive noise receptors, are approximately 1,540 feet to the west. A school is approximately one-half mile northwest of this site.

#### **9.3.2.2.3 City of Vernon Storage Yard**

The City of Vernon Storage Yard is at 2800 South Soto Street, almost due north of the proposed site. The site is surrounded by industrial uses and is zoned Industrial. A power plant would be consistent with the zoning.

Use of the City Storage Yard would require construction of a new switchyard and transmission lines approximately 400 feet long to tie into the LADWP system, a natural gas pipeline approximately 1,000 feet long, and a recycled water pipeline approximately 1 mile long. The site has water and sewer service, but an upgrade would be required. The storage yard would have to be cleared and its contents moved to another location.

The facility would be within an industrial area that has several nearby tall industrial structures. The nearest residential uses to the project, which are potentially sensitive noise receptors, are approximately 2,480 feet north of this site. A school is approximately 0.7 mile northeast of this site.

#### **9.3.2.2.4 Watkins Property**

The Watkins Property is at the corner of Ayers and Bandini Roads, due east of the proposed site. The site is surrounded by industrial uses and is zoned Heavy Industrial. A power plant would be consistent with the zoning.

Use of the Watkins Property would require construction of a new switchyard and transmission lines approximately 100 feet long to the LADWP system and a recycled water pipeline approximately 1 mile long. A new 1.5-mile-long gas line would also be needed. The site has water and sewer service. However, an upgrade to the sewer line may be required. The storage yard would have to be cleared, and its contents moved to another location.

The facility would be within an industrial area that has several nearby tall industrial structures. The nearest residential uses to the project, which are potentially sensitive noise receptors, are less than 1,000 feet south of this site. A school is approximately 1,000 feet south of the site, and a church is approximately 4,000 feet northeast of the site.

### **9.3.2.3 Environmental Considerations**

In this section, the potential environmental impacts of the four alternative sites are discussed in comparison to the proposed site. The No Project alternative is also analyzed. Potential environmental impacts from use of the proposed site are presented in more detail in the 16 environmental subsections of Section 8 of the Application for Certification (AFC). Table 9.3-2 (located at the end of this section) summarizes the impacts of each alternative site in comparison to the proposed site. Unless otherwise stated, it is assumed that the No Project alternative would not provide the benefits of the project, would not meet the basic project objectives of the Applicant, and would not result in the impacts associated with the project.

#### **9.3.2.3.1 Air Quality**

The plant's configuration and operation would be essentially the same at every location from an air quality perspective. The type and quantity of air emissions from the alternative sites would be identical. However, the impacts on the human population and the environment may differ slightly because of the location of residences and other human uses in the project vicinity. Local terrain is similar at all sites and not likely to change impacts. All of these sites are in the same air basin, and offsets acquired by the City of Vernon would be equally appropriate for every site. Potential impacts of the project to residents are discussed in Subsection 8.6, Public Health, and potential impacts on wildlife are discussed in Subsection 8.2, Biological Resources.

Electricity required to support growth within the City of Vernon's boundaries would be provided under contracts from other power-generating sources outside the City. Therefore, it is likely that older plants, which create more air pollution than the proposed project, would remain online. In addition, electrical losses would result from the transmission of power over longer distances. Thus, overall, the air quality would be slightly worse than if the plant were not built.

#### **9.3.2.3.2 Biological Resources**

Special-status species that are recorded, or that potentially occur in the region, are the same for all sites. Each alternative site is considered within the potential habitat range of Cooper's hawk (species of special concern), peregrine falcon (state endangered), sharp skinned hawk (species of special concern), and burrowing owl (federal and state species of special concern). As with the proposed site, all four alternative sites are within an industrial zone (with little to no habitat for special status species), are developed (having the ground covered by either gravel or asphalt), and have no natural biological habitat. None of the sites would directly affect threatened or endangered species from development of the project site.

With the No Project alternative, the sites would remain in the current state and no additional biological impacts would occur. However, the sites would likely be developed for other industrial or commercial uses.

### 9.3.2.3.3 Cultural Resources

The proposed site and the four alternative sites have similar cultural impacts. Each site is within the Los Angeles River Basin and within an industrial area comprising historic structures. However, all four are in an area that has been highly disturbed by past and current industrial operations. A record search of the area was performed by staff of the Central California Information Center, South Central California Information Center (California State University, Fullerton). Cultural resource sensitivity is generally considered low.

With the No Project alternative, there would be no impact to archeological or historic resources, although sensitivity is low.

### 9.3.2.3.4 Land Use

The proposed site and the four alternative sites are located in the City of Vernon. A summary of the land use issues is provided in Table 9.3-4.

TABLE 9.3-4  
Land Use Status of Sites

Site Location	Zoning	General Plan
Vernon Power Plant	General Industrial	General Industrial
Aluminum Plant Site	General Industrial	General Industrial
Recycling Yard	General Industrial	General Industrial
City of Vernon Storage Yard	Heavy Industrial	Heavy Industrial/Warehousing
Watkins Property	Heavy Industrial	Heavy Industrial/Warehousing

Source: Vernon, 2001; Vernon, 2005

The Aluminum Plant and the Recycling Yard sites are zoned as General Industrial. A power plant is consistent with the zoning for these sites. No additional land use entitlements are required for the use of these sites.

The City of Vernon Storage Yard and Watkins Property are zoned Heavy Industrial. A power plant is consistent with the zoning for both sites. No additional land use entitlements are required for the use of these sites.

With the No Project alternative, the land uses would remain as they are and are presumed to be consistent with existing land use plans and policies.

### 9.3.2.3.5 Noise

The proposed site has a rental unit approximately 750 feet to the northeast of the site above a restaurant. The MGS is between this dwelling unit and the proposed site. Other sources of environmental noise in the project area include numerous industrial operations, significant heavy truck traffic on local roads, and nearby railroad lines. Noise from industrial activities occurs on a 24-hour basis. The proposed VPP will produce noticeable noise during operations, but the noise levels will be in compliance with City of Vernon's requirements for industrial properties. The noise levels are also somewhat blocked by a barrier effect provided by the buildings surrounding the site.

The Aluminum Plant site has six houses approximately 1,200 feet to the east of the site on Downey Road. Sources of environmental noise in the project area include numerous industrial operations, significant heavy truck traffic on local roads, and nearby railroad lines. Noise from industrial activities occurs on a 24-hour basis. A power plant would produce noticeable noise during operations, but the noise levels would be in compliance with City of Vernon's requirements for industrial properties. The noise levels would also be somewhat blocked by a barrier effect provided by the buildings surrounding the site.

Both the Recycling Yard and the City of Vernon Storage Yard have nearby residences. The Recycling Yard has a subdivision approximately 1,500 feet to the west of the site, and the City of Vernon Storage Yard is approximately 3,500 feet south from the closest resident. Sources of environmental noise in the area include industrial operations, truck traffic, and railroad lines. A power plant would produce noticeable noise during operations, but the noise levels would be in compliance with the City's requirements. Noise would be somewhat blocked by the surrounding buildings.

The Watkins Property is approximately 1,000 feet north of the nearest residences and a school. Sources of environmental noise in this area include a railyard, industrial operations, and heavy truck traffic. A power plant would produce noticeable noise during operations, but the noise levels would be in compliance with the City's noise requirements. However, unlike the other alternative sites, the site is not surrounded by buildings that could provide a buffering effect. Instead, to the south is the Los Angeles River, and just south of that is a subdivision. Noise from the site would likely directly affect residents in that subdivision.

The No Project alternative would not result in further immediate development in these areas, and ambient noise levels would likely remain unaffected.

#### **9.3.2.3.6 Public Health**

The proposed site and the four alternative sites are within 1 mile of sensitive receptors such as schools, hospitals, churches, residential areas, or other facilities that would potentially be considered sensitive receptors for public health. However, public health impacts are generally related to air quality, which is not expected to result in significant impacts. At a screening level, the sites appear equivalent with respect to this environmental resource.

Under the No Project alternative, land uses would remain the same. Therefore, there would be no change to public health.

#### **9.3.2.3.7 Worker Health and Safety**

Potential impacts on worker health and safety are activity-specific rather than site-specific. Regardless of the location, VPP will prepare appropriate health and safety plans to protect workers and reduce the potential for injuries. Therefore, the worker health and safety impacts from all of the alternative sites are equivalent to the proposed site.

Under the No Project alternative, there would be no construction and, therefore, no impacts to workers.

#### **9.3.2.3.8 Socioeconomics**

The proposed and alternative sites are in the City of Vernon. The City of Vernon is 1 of 88 cities within Los Angeles County, and it is likely that most local purchases for construction and operation supplies would be made in Los Angeles County. Because the point of sale



and the county of sale receive the greater portion of sales taxes that are not retained by the state, the local impacts would be similar among the alternatives because they are all in Los Angeles County.

Workforce would likely come from Los Angeles County and possibly Ventura, Orange, Riverside, and San Bernardino Counties. Because of the proximity of these counties, and the relative proximity of the alternative sites to each other, the origin of the workforce would not change among the alternative sites. Environmental justice issues would also be similar for all of the sites.

With the No Project alternative, no economic benefit would be realized within the region of influence.

#### **9.3.2.3.9 Agriculture and Soils**

The proposed site and the four alternative sites are sited in areas with heavy industrial uses. All four alternative sites have a relatively low capability to support commercial crop production. The proposed and alternative sites will not affect Prime Farmlands or other important farmlands because the site and surrounding areas have been developed for urban land uses (industrial, commercial, and residential). The project may affect some minor areas of land used for agricultural production under utility rights-of-way.

Under the No Project alternative, soils used for agricultural purposes would not be affected.

#### **9.3.2.3.10 Traffic and Transportation**

The proposed site and alternative sites have easy freeway access. The alternative sites are easily accessible via the Long Beach Freeway (I-710), and the San Bernardino Freeway (I-10). The area can be accessed by heading west on the Bandini exit from I-710. All four sites would be accessed by collector roads; however, the entire area is served through a north/south, east/west grid of roads making construction traffic easily dispersed throughout the road network.

The Union Pacific, Los Angeles Junction, and Santa Fe Railroads have main lines within the City. An existing Los Angeles Junction railway spur on the south and west sides of the proposed project site and the Aluminum Plant site may be used for delivery of large or heavy equipment to the proposed site. The City of Vernon Storage Yard and Recycling Yard do not have any rail lines or railroad spurs near, or adjacent to, the site for use in transporting heavy equipment. However, there is a rail yard less than a mile from these sites.

Watkins Property is about one-fourth mile south of the main railyard in Vernon. Although there are not rail spurs on the site, a rail line runs parallel and approximately 100 feet south of the south property line of the site.

Proximity to rail lines would allow heavy equipment (turbines and heat recovery steam generator [HRSG] components) to be shipped by rail. Therefore, the proposed site, the Aluminum Plant site, and the Watkins Property have a slight advantage from a traffic perspective.

The No Project alternative would have no impact on traffic.

#### 9.3.2.3.11 Visual Resources

The potential for visual resource impacts associated with each of the sites varies depending on the relative visibility of the sites from roads and residences and the length and potential visibility of new transmission lines that the power plant would require. Visual impacts are also a function of the surrounding facilities.

All four alternative sites and the proposed project site are in a heavily industrial area. However, because of the density and size of the surrounding industrial buildings, the projected viewshed is limited to adjacent streets for the proposed VPP site, Aluminum Plant site, Recycling Yard, and the City Storage Yard. Large industrial buildings block the majority of views from most locations within the surrounding area. Additionally, there are no elevated points with views of the project, as the topography of the City is generally flat.

At the Watkins Property, however, industrial buildings surround the site only on the west and north. Residences to the south have a fairly unobstructed view of this site. To the east, an unobstructed view of the site would be seen from motorists traveling along I-710.

The No Project alternative would avoid visual impacts from the development of a power plant and would avoid introducing additional tall structures such as exhaust stacks and transmission lines.

#### 9.3.2.3.12 Hazardous Materials Handling

The same quantity of hazardous materials would be stored and used at all locations. Delivery of aqueous ammonia and other hazardous materials is typical in the region because of widespread industrial uses in this area. Additional deliveries for the facility would be consistent with existing conditions.

The No Project alternative would avoid the incremental increase in transportation, use, and storage of hazardous materials during construction and operation of a power plant.

#### 9.3.2.3.13 Waste Management

The amount of waste generated is plant-specific, not location-specific. Therefore, the same quantity of waste will be generated at all sites. The environmental impact of waste disposal would not differ significantly between sites.

The No Project alternative would eliminate the need to dispose of liquid and solid waste from the construction and operation of the power plant.

#### 9.3.2.3.14 Water Resources

Industrial water for the plant at any site would consist of recycled water from the Central Basin Municipal Water District (CBMWD). Use of recycled wastewater is considered preferable to use of surface water or groundwater. Therefore, all sites are generally equivalent with respect to water use. However, three of the four alternative sites would need about 1 mile of new recycled water line; the Aluminum Plant site has recycled water already available in the adjacent street. The development of the proposed power plant is also prompting CBMWD to enhance its recycled water system by constructing 10 miles of new recycled water line. This system improvement would occur were the plant to be located at any of the sites.

The No Project alternative would not create an additional demand for recycled water, and, therefore, it would not spur the development of additional capacity of the recycled water system.

#### 9.3.2.3.15 Geologic Hazards and Resources

Due to the screening level of this analysis and proximity of the sites to each other, no site-specific seismic analysis was performed. The potential for seismic impacts would be essentially the same for all sites and can be addressed in plant design.

The No Project alternative would not affect geological hazards or resources.

#### 9.3.2.3.16 Paleontological Resources

In the vicinity of all of these sites, an alluvial fan extends south and southwest from the Hollywood and Glendale Hills to the ocean, on what was once the floodplain of the Los Angeles River. The Los Angeles River lies less than a mile to the northeast and east of the project site. Geological materials composing the alluvial fan in the vicinity of this site is underlain by Late Quaternary (Late Pleistocene and Holocene) alluvium, which locally consists of unconsolidated Los Angeles River floodplain and alluvial fan deposits of silt, sand, and gravel derived from the hills and mountain ranges that form the northern border of the central Los Angeles Basin. Quaternary (Pleistocene and Holocene) terrestrial sediments underlie this general area and would be affected by project construction. The undisturbed Quaternary sediments beneath the project site and offsite laterals possess high paleontologic sensitivity. Therefore, sites adjacent to the Los Angeles Basin (City Storage Yard and Watkins Property) are considered to have a higher potential for paleontological impacts. The Recycling Yard, Aluminum Plant site, and proposed VPP site are considered to have slightly lower potential for paleontological impacts. In any case, the paleontological impacts could be mitigated below the level of significance.

The No Project alternative would not affect paleontological resources.

## 9.4 Selection of the Proposed Site

Table 9.4-1 compares the potential environmental impacts of the proposed VPP site with the other alternatives. As shown in the table, no alternative site would feasibly attain most of the basic objectives of the project while also avoiding or substantially lessening potentially significant effects of the project.

The VPP site is adjacent to an existing power plant (Light and Power, Station A). The linear facilities are longer, in some cases, than the four alternative sites, but distances are reasonable. The site has a rail spur on the west and south sides that can be used to transport heavy equipment. The nearest receptor is a rental apartment above a restaurant, approximately 750 feet from the VPP site; however, the noise from the VPP would be buffered by MGS and the surrounding buildings in the area.

TABLE 9.4-1  
Comparison of the Proposed Site and Alternative Site Locations

Characteristic	VPP (proposed)	Aluminum Plant	Recycling Yard	City of Vernon Storage Yard	Watkins Property
Size of parcel (parcel must be greater than 5.5 acres)	Yes	Yes	Disqualified (parcel too small)	Disqualified (parcel too small)	Yes
Potential presence of threatened and endangered species/habitat	Low	Low	Low	Low	Low
Potential cultural/ archaeological sensitivity	Low	Low	Low	Low	Low
Appropriate zoning	Yes	Yes	Yes	Yes	Yes
Proximity to sensitive noise receptors	1 apartment unit, 750 ft. Subdivision at 1,500 feet	6 residences within 1,200 feet	1,540 feet to nearest subdivision	3,480 feet to nearest subdivision	1,000 feet to nearest subdivision
Potential for noise in residential areas	Moderate	Low	Low	Low	Moderate
Risk to humans from deposition of air pollutants	Low	Low	Low	Low	Low
Removal of prime agricultural land	No	No	No	No	No
Traffic and transportation	Low	Low	Low	Low	Low
Potential visual sensitivity	Low	Low	Low	Low	Moderate
Risk to humans from offsite migration of hazardous materials	Low	Low	Low	Low	Low
Ability to use water consistent with State Water Resources Control Board policy	Yes	Yes	Yes	Yes	Yes
Distance to recycled water line	2,000 feet	Tap into main on Boyle Ave.	1.2 miles	1.0 mile	3.0 miles
Potential paleontological sensitivity	Medium	Medium	Medium	High	High
Existing gas supply	1 mile	2,200 feet	2,000 feet	1,000 feet	1.5 miles
Existing transmission (closest transmission system)	4,500 feet (LADWP)	1,500 feet (LADWP)	1.75 miles (LADWP)	400 feet (LADWP)	100 feet (LADWP)

The VPP site is adjacent to an existing power plant; has nearby tall industrial structures; is close to rail lines; and has proper zoning, minimal biological and cultural sensitivity, and linear corridors of reasonable length. However, the VPP plant site has residential receptors nearby.

All four alternative sites are within an industrial area on land zoned and used for industrial purposes. The four alternative sites are near industrial uses that operate 24 hours per day, 7 days per week and, therefore, would have a higher ambient noise level.

The Aluminum Plant is closest to a transmission corridor and can tie into the LADWP transmission system about 1,000 to 1,500 feet to the east. A natural gas line would also need to be constructed at this site, approximately 2,200 feet long. The nearest receptor is approximately 1,200 feet from the VPP site; however, the noise from the VPP would be buffered by surrounding buildings in the area.

The Recycling Yard is slightly farther from residential receptors and is adjacent to a rail spur. However, the site is substantially smaller than the 5.5 acres needed to site a 610-MW facility and is disqualified as a viable alternative. In addition, it has insufficient transmission line capacity and would require a new 5.1-mile-long transmission line and 1.2 miles of recycled water line. A natural gas line would also need to be constructed at this site, approximately 2,000 feet long.

The City of Vernon Storage Yard is slightly farther from residential receptors. However, the site is substantially smaller than the 5.5 acres needed to site a 610-MW facility and is disqualified as a viable alternative. In addition, it has insufficient transmission line capacity and would require a new 400-foot-long transmission line and a 1.0-mile-long recycled water line. A natural gas line would also need to be constructed at this site, approximately 1,000 feet long. Due to the proximity of the Los Angeles River Basin, the paleontological sensitivity in this area is slightly higher.

The Watkins Property is adjacent to a rail spur; however, the site is also approximately 1,000 feet away from a residential subdivision. Noise from this site would be projected toward the subdivision. In addition, it would require a new 3-mile-long recycled water line and a 100-foot-long transmission line to the LADWP corridor. Also, because of the proximity of the Los Angeles River Basin, the paleontological sensitivity in this area is slightly higher.

## 9.5 Alternative Linear Corridors

Linear facilities required for VPP include an electric transmission line, natural gas supply line, potable water line, recycled water line, and sewer line (see Figure 2.1-1). The proposed linear facilities are presented in Section 2.0, Project Description; Section 5.0, Electric Transmission; Section 6.0, Natural Gas Supply; and Section 7.0, Water Supply. This section compares the alternative routes. The comparison is made among the following categories:

- **Institutional Factors.** Institutional factors are an assessment of the ease of obtaining rights-of-way, public agency support, required permits, etc.
- **Engineering/Construction Feasibility.** Engineering/construction feasibility is an assessment of how the pipeline can be physically placed along a given route.

- **Length of Linear Feature.** Length of transmission line is important because cost and potential environmental impacts are usually functions of length.
- **Environmental Factors.** Environmental factors are an initial assessment of which routes would have the least impact on the environment. Environmental impacts must be either not significant or mitigatable to a less-than-significant level.

### 9.5.1 Potable Water Supply

Potable water will be provided from the City of Vernon's potable water system using existing water mains in both Seville and Soto Streets. Because of its proximity to the site, no alternatives were considered.

### 9.5.2 Recycled Water

Recycled water will be supplied by the CBMWD. The recycled water will be delivered to VPP through an existing recycled water pipeline in Boyle Avenue, about 2,000 feet away. Because of its proximity to the site, no alternatives were considered.

### 9.5.3 Sanitary Sewer Line

Two options for the sanitary sewer line are being considered. Construction of either alternative will be by open trench:

- **Alternative A:** An 18-inch sanitary sewer line will travel from the west side of the plant, south along Seville Avenue to Fruitland Avenue, west along Fruitland Avenue to Malabar Street, south on Malabar to 52<sup>nd</sup> Street, west on 52<sup>nd</sup> Street to Santa Fe Avenue, south on Santa Fe Avenue to 52<sup>nd</sup> Street, and west on 52<sup>nd</sup> Street to Alameda Street, for a total distance of about 1 mile.
- **Alternative B:** An 18-inch sanitary sewer line will travel from the east side of the plant, south on Soto Street to 54<sup>th</sup> Street, east to Boyle Avenue, and south to Slauson Avenue, for a total distance of about 1 mile.

Because both options will be constructed down existing streets, the primary impact is to traffic. Because of the short-term nature of the construction (approximately 6 months for the longer Alternative B) and with the implementation of traffic control measures described in Subsection 8.10, impacts will be mitigated below the level of significance.

### 9.5.4 Natural Gas Supply Line

Natural gas will be delivered to the site via a 20-inch-diameter pipeline. This approximately 1-mile-long pipeline will extend from the old H. Gonzales City Gate Meter Yard on the southwest corner of Downey Road and 50<sup>th</sup> Street, then head west along 50<sup>th</sup> Street to the plant site. The natural gas will flow through a flow-metering station at the City Gate Meter Yard, which connects to Southern California Gas Company's Line 765 running underneath Downey Road. At the plant site, the natural gas will flow through gas scrubber/filtering equipment, booster compressors (when required), and a fuel gas heater prior to entering the combustion turbines. Construction will primarily be by open trench. Because of the short distance and direct route, no alternative routes were considered.

## 9.5.5 Electric Transmission Lines

Two interconnection designs were considered: (1) connecting to LADWP's Velasco-to-Century 230-kV lines that run down a transmission line corridor between and parallel to Alcoa Avenue and S. Downey Road; and (2) connecting to Southern California Edison's (SCE) transmission system at its Laguna Bell Substation in the City of Commerce. Both options are analyzed below.

### 9.5.5.1 Connection to LADWP (Proposed Transmission Line Route)

This option will connect VPP to the power grid by looping the western circuit of the LADWP Velasco-to-Century 230-kV line into the plant switchyard on a double-circuit pole structure. The 230-kV transmission line will exit the plant switchyard and head north on Soto Street and east on Leonis Boulevard to the LADWP right-of-way. This will require a pole of the type depicted in Section 5. Total distance is about 4,500 feet. Alternatives for interconnecting to LADWP include using either 50th Street or Fruitland Avenue as the route for the connection to the LADWP Velasco-to-Century 230-kV line. These routes are substantially equivalent to the preferred route, but City of Vernon utility personnel deemed the Leonis Boulevard route superior because it has less existing distribution and communications lines that might need to be displaced.

### 9.5.5.2 Connection to SCE

In considering the connection to SCE's system, three alternatives were studied. Each alternative is free of significant impacts, but the Los Angeles River route has small comparative advantages. Therefore, it was chosen for analysis as the alternative transmission route.

#### 9.5.5.2.1 Laguna Bell via Los Angeles River (Alternative Transmission Line Route)

The double-circuit 230-kV transmission line will exit the switchyard and head north on Soto Street and east on Leonis Boulevard. It will continue on Leonis past the LADWP right-of-way down District Boulevard and cross the Los Angeles River. It will then follow an existing 66-kV sub-transmission line right-of-way along the east side of the river. The 66-kV line will be removed and replaced with Vernon's spare circuit and the idle SCE circuit. At Randolph Street, the route will turn east and proceed to the Laguna Bell Substation. Total distance is approximately 5 miles. (See Transmission System Engineering, Subsection 5.2, and Figure 5.1-1.)

#### 9.5.5.2.2 Laguna Bell via Randolph Street and Alcoa

From the plant's switchyard, the line will head east to the LADWP right-of-way, via Fruitland Avenue to Alcoa Avenue. At Alcoa Avenue, the line will turn south and follow the east side of Alcoa to Randolph Street. It will continue east on Randolph Street to the Laguna Bell Substation, for a total distance of approximately 5 miles.

#### 9.5.5.2.3 Laguna Bell via Randolph Street and LADWP Right-of-Way

The double-circuit 230-kV transmission line will exit the switchyard and head north on Soto Street and east on Leonis Boulevard. At the LADWP right-of-way, the route will turn south and proceed to Randolph Street. It will continue east on Randolph Street to the Laguna Bell Substation, for a total distance of about 5.3 miles.

#### 9.5.5.2.4 Environmental Factors

Each of the routes would have similar impacts in most of the environmental areas because they will be aboveground and be constructed using similar methods, cross similar habitat, and cross the Los Angeles River just once. The differences between routes, although minor, likely exist in the areas described below. It should be noted that these differences are slight and construction of either of the alternative routes would not likely result in significant adverse impacts.

- **Air Quality.** Impacts would occur as a result of emissions from construction equipment. Because construction techniques would be similar, there would be a slight, but insignificant difference from construction the shorter route.
- **Biological Resources.** Both transmission routes would generally follow roads and rights-of-way that are partly disturbed. No significant site-specific natural habitats or resources have been identified at this time. Small sites can be avoided if discovered through small changes within the transmission line corridor and span length. However, there is a slight possibility of bird collisions.
- **Cultural and Paleontological Resources.** Although cultural and paleontological resource sensitivity is not high throughout the area, it is assumed that sensitivity would be higher along the river; therefore, the Los Angeles River route would likely be more sensitive. Even if more sensitive, because the route would only require placing a transmission tower no more than every 150 feet, the area of impact would be small, and, therefore, it is unlikely that any route would encounter cultural resources.
- **Noise.** As with air quality impacts, noise impacts would be primarily a function of the duration and type of construction. Crossing the Los Angeles River in all cases would be by way of overhead lines. The Randolph Street route passes by more residential areas, whereas the Los Angeles River route is industrial the entire route. Although the Randolph Street would have more residential areas, the construction activities would occur during daytime hours and would be of short duration.
- **Public Health.** Public health is a function of air quality and, therefore, would indicate the same preferences as air quality. In addition, the new transmission line would emit electric and magnetic fields (EMF). As described in Subsection 5.5, there is no conclusive evidence that EMF has a health impact. However, if EMF is a concern, the addition of the proposed circuits to the existing right-of-way provides the opportunity to shape and minimize the electric and magnetic fields. Also, as shown in the EMF analysis, the area of impact is small. Therefore, EMF impacts would not be significant in either case and would provide opportunities for mitigation not associated with the “No Project” alternative.
- **Traffic and Transportation.** Traffic impacts would likely be greater along the Randolph Street routes, because the Los Angeles River route follows the LADWP corridor, then follows the north side of the Los Angeles River until Randolph Street. This route avoids most roadways. Although the Randolph Street routes follow Randolph Street for approximately 3.4 miles, on the west side of the river, Randolph Street is actually two streets with traffic in both directions on each street. Therefore, traffic could be rerouted around the construction zones. In addition, construction would take place during the



off-peak hours so as not to impede traffic flow along Randolph Street. Also, construction would be of short duration at any one location.

- Visual.** As with traffic and transportation, the Randolph Street routes would be more sensitive due to the number of residences along that route, whereas the Los Angeles River route would follow behind industrial buildings most of the way. However, if the line is built on the Randolph Street route, a set of existing 66-kV subtransmission lines that now serve Vernon would be removed to make room for the 230-kV line, and the 66-kV system would be powered from elsewhere in Vernon. Although the 230-kV towers are taller than the existing 66-kV towers, they also have a longer span (which means fewer towers) and would add a cleaner look.
- Conclusion.** Each route used to interconnect to SCE's Laguna Bell substation has slight benefits over the other, with a small overall preference for the Los Angeles River route. In each case, potential impacts can be mitigated below the level of significance; therefore, there is no strong environmental preference for either route. All of these alternatives have positive attributes when compared to the No Project alternative. Institutional factors, engineering/construction feasibility, and the industrial land uses favor the Los Angeles River route. Therefore, the Los Angeles River route was analyzed in greater detail in this application as an alternative to the LADWP route.

## 9.6 Alternative Project Configurations

The proposed project configuration of VPP is the result of considering a variety of design and operating limitations. The main factors affecting the configuration include available gas turbine-generator sizes, economies of scale for both construction and operation of the plant, fuel supply, power transmission capacities, and forecast market demand for electrical power. Two combustion turbine suppliers were evaluated for the VPP project: GE Energy and Siemens Power Generation, the two largest suppliers of gas and steam turbine power generation equipment in the world. The evaluations included 3 months of communications; the exchange of engineering and commercial documents; and the review of the technologies on the basis of cost, schedule, power, heat rate, and – most importantly – environmental considerations in respect to power generation emissions. Based on the City's evaluation for this plant, the decision was made to select Siemens Power Generation.

A 2x1 configuration using the Siemens SGT6-5000F combustion turbines provides excellent overall plant reliability by having more generators with fewer megawatts per generator. In other configurations, such as a 1x1, a gas turbine outage or trip may shut down the entire plant. In a 2x1 configuration, a single gas turbine outage or trip would shut down half the plant; however, a 3x1 configuration would allow for up to 75 percent of the base load if one of the units is in an outage or trip. Unfortunately, a 3x1 configuration was determined to be too large for market demand. Therefore, a 2x1 configuration was selected.

## 9.7 Alternative Technologies

Other generation technologies considered for VPP are grouped according to the fuel used:

- Oil
- Coal
- Nuclear
- Hydroelectric
- Biomass
- Solar
- Wind

Alternative technologies were evaluated with respect to commercial availability, implementability, and cost-effectiveness.

### 9.7.2.1 Oil; Coal; Conventional and Supercritical Boiler/Steam Turbine, or Simple Combustion Turbine

These technologies are commercially available and could be implemented. However, because of relatively low efficiency, they emit a greater quantity of air pollutants per kilowatt-hour generated than technologies that are more efficient. The cost of generation is relatively high relative to combined-cycle/natural gas-fired technologies.

### 9.7.2.2 Nuclear

California law prohibits new nuclear plants until the scientific and engineering feasibility of disposal of high-level radioactive waste has been demonstrated. To date, the California Energy Commission (CEC) is unable to make the findings of disposal feasibility required by law for this technology to be viable in California. This technology, therefore, is not implementable.

### 9.7.2.3 Water

These technologies use water as “fuel,” and include hydroelectric, geothermal, and ocean energy conversion.

#### 9.7.2.3.1 Hydroelectric

Most of the sites for hydroelectric facilities have already been developed in California, and remaining potential sites face lengthy environmental licensing periods. It is doubtful that this technology could be implemented within 3 to 5 years, and the cost would probably be higher than the cost of a conventional combined-cycle. There are no hydroelectric sites within the City.

#### 9.7.2.3.2 Geothermal

Geothermal development is not viable at the VPP project location because suitable thermal vents and strata are not present. Therefore, it was eliminated from consideration.

### 9.7.2.4 Biomass

Major biomass fuels include forestry and mill wastes, agricultural field crop and food processing waste, and construction and urban wood wastes. Their cost tends to be high relative to conventional combined-cycle units burning natural gas.

#### **9.7.2.5 Solar**

Most of these technologies collect solar radiation, heat water to create steam, and use the steam to power a steam turbine/generator. Power is only available while the sun shines so the units do not supply power that can be cycled up or down to follow demand. The cost of solar power is relatively high when compared to combined-cycle units burning natural gas.

#### **9.7.2.6 Wind Generation**

In California, the average wind generation capacity factor has been 25 to 30 percent and, like solar, cannot be cycled up and down to track demand. The cost of generation is generally above the cost of combined-cycle units burning natural gas. There are no wind generation sites within the City.

### **9.8 References**

California Energy Commission. 1995. 1994 Biennial Electricity Report (ER94), P300-95-002. November.

City of Vernon. 2001. General Plan.

City of Vernon. 2005. Comprehensive Zoning Ordinance.

**TABLE 9.3-2**  
**Summary Comparison of Environmental Effects of Alternative Project Sites**

<b>Resource</b>	<b>VPP (Proposed)</b>	<b>Aluminum Plant</b>	<b>Recycling Yard</b>	<b>City Storage Yard</b>	<b>Watkins Property</b>
Air Quality	Emissions from the plant would be the same at every location. It is assumed that offsets would be available for every site. Construction impacts would be in the low to mid-range since this site would require construction of 2 pipelines about 1 mile long. Overall, air quality impacts would be expected to be less than significant.	Emissions from the plant would be the same at every location. It is assumed that offsets would be available for every site. Construction impacts would be in the low range since this site would require less than 1 mile of pipeline construction. Overall, air quality impacts would be expected to be less than significant.	Emissions from the plant would be the same at every location. It is assumed that offsets would be available for every site. Construction impacts would be in the low range since this site would require approximately 1.5 miles of pipeline construction. Overall, air quality impacts would be expected to be less than significant.	Emissions from the plant would be the same at every location. It is assumed that offsets would be available for every site. Construction impacts would be low since this site would require 1.2 miles of pipeline construction. Overall, air quality impacts would be expected to be less than significant.	Emissions from the plant would be the same at every location. It is assumed that offsets would be available for every site. Construction impacts would be in the mid-range since this site would require at least 3 miles of recycled water pipeline, plus construction of a sewer line. Overall, air quality impacts would be expected to be less than significant.
Biological Resources	The site is in an industrial area providing little to no usable habitat for wildlife. The project site is surrounded on four sides by industrial uses. No sensitive habitat is present.	The site is in an industrial area providing little to no usable habitat for wildlife. The project site is surrounded on four sides by industrial uses. No sensitive habitat is present.	The site is in an industrial area providing little to no usable habitat for wildlife. The project site is surrounded on four sides by industrial uses. No sensitive habitat is present.	The site is in an industrial area providing little to no usable habitat for wildlife. The project site is surrounded on four sides by industrial uses. No sensitive habitat is present.	The site is in an industrial area providing little to no usable habitat for wildlife. The project site is surrounded on four sides by industrial uses. No sensitive habitat is present.

**TABLE 9.3-2**  
**Summary Comparison of Environmental Effects of Alternative Project Sites**

<b>Resource</b>	<b>VPP (Proposed)</b>	<b>Aluminum Plant</b>	<b>Recycling Yard</b>	<b>City Storage Yard</b>	<b>Watkins Property</b>
Cultural Resources	The VPP vicinity has been surveyed several times. Based on these surveys, the location is expected to have low cultural sensitivity. With implementation of appropriate mitigation measures, it is anticipated that potential cultural resource impacts could be mitigated below the level of significance.	The plant vicinity has been surveyed several times. Based on these surveys, the location is expected to have low cultural sensitivity. With implementation of appropriate mitigation measures, it is anticipated that potential cultural resource impacts could be mitigated below the level of significance.	A cultural resource search has not been performed for this site. However, based on the location of this site and its proximity to the proposed site, this site is anticipated to have low cultural sensitivity. With implementation of appropriate mitigation measures, it is anticipated that potential cultural resource impacts could be mitigated below the level of significance.	A cultural resource search has not been performed for this site. However, based on the location of this site and its proximity to the proposed site, this site is anticipated to have low cultural sensitivity. With implementation of appropriate mitigation measures, it is anticipated that potential cultural resource impacts could be mitigated below the level of significance.	A cultural resource search has not been performed for this site. However, based on the location of this site and its proximity to the proposed site, this site is anticipated to have low cultural sensitivity. With implementation of appropriate mitigation measures, it is anticipated that potential cultural resource impacts could be mitigated below the level of significance.
Land Use	The site is in the City of Vernon. It is zoned General Industrial. A power plant is consistent with this zoning.	The site is in the City of Vernon. It is zoned General Industrial. A power plant is consistent with this zoning.	The site is in the City of Vernon. It is zoned General Industrial. A power plant is consistent with this zoning.	The site is in the City of Vernon. It is zoned Heavy Industrial. A power plant is consistent with this zoning.	The site is in the City of Vernon. It is zoned Heavy Industrial. A power plant is consistent with this zoning.
Noise	The plant's noise output would be approximately the same at all sites. There is one residence about 750 feet from the plant site. A subdivision is about 1,500 feet away. Noise from the plant would be buffered by the MGS and surrounding buildings.	The plant's noise output would be approximately the same at all sites. There are 6 residences within 1,200 feet of the plant site. Noise from the plant would be buffered by the buildings surrounding this site.	The plant's noise output would be approximately the same at all sites. There is a subdivision within 1,500 feet of the plant site. Noise from the plant would be buffered by the buildings surrounding this site.	The plant's noise output would be approximately the same at all sites. There is a subdivision within 3,500 feet of the plant site. Noise from the plant would be buffered by the buildings surrounding this site.	The plant's noise output would be approximately the same at all sites. There is a subdivision within 1,000 feet of the plant site. Buildings are on three sides (north, west, and east); however, the subdivision is to the south. Noise from this site would likely have a direct impact on the subdivision.

**TABLE 9.3-2**  
**Summary Comparison of Environmental Effects of Alternative Project Sites**

<b>Resource</b>	<b>VPP (Proposed)</b>	<b>Aluminum Plant</b>	<b>Recycling Yard</b>	<b>City Storage Yard</b>	<b>Watkins Property</b>
Public Health	The impacts are directly related to air quality impacts described above, considered to be less than to be significant.	The impacts are directly related to air quality impacts described above, considered to be less than to be significant.	The impacts are directly related to air quality impacts described above, considered to be less than to be significant.	The impacts are directly related to air quality impacts described above, considered to be less than to be significant.	The impacts are directly related to air quality impacts described above, considered to be less than to be significant.
Worker Health and Safety	No difference.	No difference.	No difference.	No difference.	No difference.
Socioeconomics	Potential impact to schools and public services is anticipated to be the same at all locations. Construction workforce would have to travel about the same for each location. Same benefit to Los Angeles County from purchase of goods and services.	Potential impact to schools and public services is anticipated to be the same at all locations. Construction workforce would have to travel about the same for each location. Same benefit to Los Angeles County from purchase of goods and services.	Potential impact to schools and public services is anticipated to be the same at all locations. Construction workforce would have to travel about the same for each location. Same benefit to Los Angeles County from purchase of goods and services.	Potential impact to schools and public services is anticipated to be the same at all locations. Construction workforce would have to travel about the same for each location. Same benefit to Los Angeles County from purchase of goods and services.	Potential impact to schools and public services is anticipated to be the same at all locations. Construction workforce would have to travel about the same for each location. Same benefit to Los Angeles County from purchase of goods and services.
Agriculture and Soils	Would represent no loss of agricultural uses in County.	Would represent no loss of agricultural uses in County.	Would represent no loss of agricultural uses in County.	Would represent no loss of agricultural uses in County.	Would represent no loss of agricultural uses in County.
Traffic and Transportation	No hazardous intersections apparent. Rail spur runs adjacent to site and would allow for heavy equipment to be delivered by rail. No significant impacts on traffic and transportation are expected.	No hazardous intersections apparent. Rail spur runs adjacent to site and would allow for heavy equipment to be delivered by rail. No significant impacts on traffic and transportation are expected.	No hazardous intersections apparent. Rail spur runs adjacent to site and would allow for heavy equipment to be delivered by rail. No significant impacts on traffic and transportation are expected.	No hazardous intersections apparent. Rail spur in the vicinity would allow for heavy equipment to be delivered by rail. No significant impacts on traffic and transportation are expected.	No hazardous intersections apparent. Rail spur in the vicinity would allow for heavy equipment to be delivered by rail. No significant impacts on traffic and transportation are expected.

**TABLE 9.3-2**

Summary Comparison of Environmental Effects of Alternative Project Sites

Resource	VPP (Proposed)	Aluminum Plant	Recycling Yard	City Storage Yard	Watkins Property
Visual Resources	The plant would be in an industrial area and surrounded on all four sides by industrial buildings. The residence in the vicinity is on a second story but would have restricted views of the site due to MGS. With mitigation measures, impacts would be less than significant.	The plant would be in an industrial area and surrounded on all four sides by several industrial buildings. Residences in the vicinity are at a similar elevation and would have restricted views of the site. With mitigation measures, impacts would be less than significant.	The plant would be in an industrial area and surrounded on all four sides by several industrial buildings. Residences in the vicinity are at a similar elevation and would have restricted views of the site. With mitigation measures, impacts would be less than significant.	The plant would be in an industrial area and surrounded on all four sides by several industrial buildings. Residences in the vicinity are at a similar elevation and would have restricted views of the site. With mitigation measures, impacts would be less than significant.	The plant would be in an industrial area and surrounded on two sides by several industrial buildings. Residences to the south would have an unobstructed view of the site. Motorists traveling on I-710 would also have an unrestricted view of the site. With mitigation measures, impacts would be less than significant.
Hazardous Material Handling	Aqueous ammonia shipments would likely come down I- 710. Residences are close to this plant, but the plant would be designed to prevent significant offsite consequences from an ammonia rupture.	Aqueous ammonia shipments would likely come down I- 710. Residences are close to this plant, but the plant would be designed to prevent significant offsite consequences from an ammonia rupture.	Aqueous ammonia shipments would likely come down I-710. Residences are close to this plant, but the plant would be designed to prevent significant offsite consequences from an ammonia rupture.	Aqueous ammonia shipments would likely come down I- 710. Residences are close to this plant, but the plant would be designed to prevent significant offsite consequences from an ammonia rupture.	Aqueous ammonia shipments would likely come down I-710. Residences are close to this plant, but the plant would be designed to prevent significant offsite consequences from an ammonia rupture.
Waste Management	No difference.	No difference.	No difference.	No difference.	No difference.
Water Resources	Would use recycled wastewater, a potential benefit.	Would use recycled wastewater, a potential benefit.	Would use recycled wastewater, a potential benefit.	Would use recycled wastewater, a potential benefit.	Would use recycled wastewater, a potential benefit.
Geologic Hazards	No difference.	No difference.	No difference.	No difference.	No difference.
Paleontological Resources	Paleontological sensitivity is low.	Paleontological sensitivity is low.	Paleontological sensitivity is low.	Paleontological sensitivity is moderate	Paleontological sensitivity is moderate.







**FIGURE 9.3-1**  
**ALTERNATIVE SITES CONSIDERED**  
VERNON POWER PLANT  
CITY OF VERNON, CALIFORNIA